RAILWAY ENGINEERING

AND MAINTENANCE OF WAY

Security Building CHICAGO

BRUCE V. CRANDALL, President MAHAM H. HAIG, Managing Editor WARREN EDWARDS, Manager NORMAN F. REHM, Editor

INDEX TO VOLUME III

5 N

January to December, 1907

Issue	Page	es	Issue	Pages	Issue	Pages	Issue	Pages
January	1 to	18	April	67 to 130	July	179 to 202	October	251 to 274
February	19 to	42	May	131 to 154	August	203 to 226	November	275 to 298
March	43 to	66	June	155 to 178	September	227 to 250	December	

ILLUSTRATED ARTICLES INDICATED BY ASTERISK

*Abernathy Steel Cattle Guard154	*Bridge, Concrete, over Big Creek
*Abutments182, 188, 209, 254	*Bridge, Concrete, Southern Ry277
*Accident Near Woodlawn on the N. Y. C. & H. R. R. R 161	*Bridge Floor, Deck Girder255
Adzing Ties305	*Bridge Floor, Through Girder254
*Alignment, Bridge Approaches187	*Bridge, Kaw River, Kansas City, Mo233
Alignment Curve, Railroad132	Bridge Painting, Sand Blast203
Alignment, Curves222	*Bridge, Peoria, Ill241
American Railway Engineering & Maintenance of Way	Bridge, Proportioning of Members263
Association 50	Bridges, Protection Against Brine289
Answers to Queries 4	*Bridge, Rolling Lift, W. & L. E. R. R
Apparatus, Mechanical Construction276	*Bridge, Towanda, Pa., Lehigh Valley R. R
Apprenticeship Course Signal Engineering166	Bridge Stringers, Strength of
*Ashpits, W. & L. E. R. R	Bridges, Design of
	Bridges, Painting of
Association of Railway Telegraph Superintendents166	Bridges, Steel, Painting in Winter43, 147, 198
*Association, American Railway Engineering and Mainte-	Broken or Failed Rails
nance of Way—	
Ballasting	*Bronx Freight Terminal, Cent. R. R. of N. J205
Buildings	*Buhrer Steel Tie
Echoes from the Convention	Building Material Preservatives
Economies of Railway Location85	Building Railroad in the Southeast
Exhibits at the Convention124	*Bumping Post, Cast Steel
Impact Testing Machine Tourneaure 99	*Bumping Post, Hoboken Terminal-D. L. & W. R. R 17
Iron and Steel Structures95	Bumping Posts
Masonry122	*Castery Tie Handling Tool
Records, Reports and Accounts	*Cafferty Tie Handling Tool
Reports of Convention	*Cattle Guard, Abernathy Steel
Roadway 93	
Signaling and Interlocking	Cement Users' Convention, Third
Signs, Fences and Cattle Guards	*Centrifugal Force on a Railroad Curve Due to Rotating
Ties	Parts of a Locomotive
Track	*Chicago Concrete Mixer
Uniform Rules, Organization, etc	
Water Service117	*Chicago Terminal District Telephone System, Rock Island Railroad
Wooden Bridges and Trestles100	
*Audible Distant Signal, Great Western Ry216	*Cinder Pit at El Paso, Tex.—El P. & S. W. Ry
*Automatic Block Signal Systems, C. M. & St. P. Ry262	*Classification Yards, P. & R. Ry
*Automatic Quick Acting Wrench	
*Automatic Track Inspector248	*Climax Track Drill
*Ball Bearing Bridge Jack	*Coaling Station
Ballasting, Cost of	*Coaling Station at Toledo, O.—L. S. & M. S. Ry 58
*Bascule Bridge, Rall Type242	
Batteries, Block Signal213	Coal Yard, B. & O. R. R., Washington, D. C
*Battery Vaults, Railway Signal	Compression Members, Bridges
Beech for Railroad Ties279	
Block and Interlocking Signals	Concrete, Action of Sea Water on
Block Signal Battery213	*Concrete Bridge Floors
Block Signal Systems	*Concrete Bridge over Big Creek
*Block Signal Systems, C. M. & St. P. Ry	*Concrete Construction, C. B. & Q. Ry
Boston and Albany Improvements154	1 - 1 - 1
	1675.051

R137

184897

Concrete in Railway Construction:	*Foot Guards, C. R. I. & P. Ry
Concrete Poles, Reinforced	*Forms, Retaining Wall210
*Concrete Roof Construction of Roundhouse D. & R. G.	Fractures, Rail15
R. R. 6 *Concrete Bridge, Design and Construction 277	Frame Trestles, Fire Protection of276
*Concrete Bridge, Design and Construction277	*Freight Terminal, Cent. R. R. of N. J
*Concrete Skew Bridge Reinforced near Decatur, Ill., Wa-	Freight Terminal, Washington, D. C269
bash Railroad	Freight Yards, Pennsylvania R. R
*Concrete Subways	*Freight Yards, Southern Ry., Atlanta, Ga
Concrete Telegraph Poles	*Gasoline Weed Burner
Construction of Track	*General Service Telephone System230 *Gibraltar Mail Crane313
*Contact Relay, Mercury	Grades and Curves, Elimination of
*Continuous Unloader for Bank Filling141	Gravity Cells, Block Signals
Contraction of Concrete Walls	*Gravity Yard, Rutherford, Pa., P. & R. Ry
Convention Exhibits 4	*Gravity Yard, W. & L. E. R. R
Convention of Railway Telegraph Superintendents203, 219	*Grinder, Portable, Tool201
Convention, Third, National Assn. of Cement Users 36	*Guard, Abernathy Steel Cattle
Conventions, Engineering252	Guards, Cattle
Conventions, Recent Railway300	Hand Car Versus Motor Car 28
Co-operation Among Departments 3	*Hand Level Pendulum 65
Corrosion, Preventing, of Steel Bridges 38	Hoboken Terminal, D. L. & W. R. R 56
Cost of Ballasting and Renewing Ties304	Holding Power of Railroad Spikes243
Cost of Concrete Construction278	*Holman Track Layer 42
Cost of Relaying Rail305	*Humps, Rutherford Gravity Yard, P. & R. Ry190
*Cost of Steam Shovel Work	*I-Beam Tie177
Cost, Right-of-Way179	*Illinois River Bridge241
*Crane, Gibraltar Mail317	*Illuminated Track Indicator Circuits253
*Cranes, Traveling, Elevated with Jacks	*Impact Testing Machine
*Cranes, Wharf, Panama R. R	*Improved Track Drill
*Cup Bar for Reinforcing Concrete	Improvement of Roadbed
Curve Alignment, Railroad	R
Curves, Elevation on	Improvements, Boston and Albany
Curves, Elimination of227	*Improvements, Pennsylvania R. R. between Philadelphia
Degree of Curves	and Baltimore140
Departments, Co-operation 3	*Inspection Car, Southern Ry256
*Derailment, Pennsylvania R. R193	*Inspection Pits, W. & L. E. R. R
Deterioration of Roadway, Causes of204	*Inspector, Automatic Track248
*Design of Rail, New258	*Insulators240
Discussion, Value of	Interlocking, Electric281
*Distant Signal, Great Western Ry216	*Interlocking Signal, Turner
*Distant Signals, C. M. & St. P. Ry262	*Interlocking Tower, N. Y. C. & H. R. R. R
Doors, Rolling and Sliding	*Jack, Ball Bearing Bridge
Double Tracking and Realignment	*Joint, Stanford Rail
Drainage of Roadbed	*Joints, Rail
*Drill, Paulus	Labor Question, Track
*Drill, Track, Improved	*Level, Pendulum Hand
Dry Battery, Block Signals	*Load Dispatchers' Telephone System
Efficient Track Labor305	Loading Bridges264
*El Paso & Southwestern Shop	Loblolly Pine
Electric Interlocking281	*Locating a Turnout Inside of Curve 37
*Electric Traction, N. Y., N. H. & H. R. R	Longleaf Pine311
Electro-Pneumatic Signals	Loss by Fire151
*Elevating Tracks, Method of255	*Magnet for Handling Steel and Iron Freight167
Elevation on Curves	*Mail Crane, Gibraltar317
*Engine Cab Signals, Great Western Ry	Maintenance and Operation of Signalling Apparatus 5
Engineering Conventions	Maintenance of Automatic Block Signals283
*Excavation, Railway Cut	Maintenance of Roadbed204
Expansion of Steel Rails	Maintenance of Track in Winter
*Expansion Joint, Kaw River Bridge234	Maintenance of Way Cost
Expediting Traffic	Maintenance of Way Expenses
Experiments with Steel Ties	Mechanical Construction of Apparatus
Extension, Railway, in Mexico154	*Mercury Contact Relay
*Facing Point Switches, Safety Device for272	*Metallic "T" Tie, Simplex
Failures, Rail	Mileage, Railroad207
Fire Loss	*Mixer, Concrete, Chicago150
*Floor, Bridge235	*Moisture Distribution in Timber310
*Floor Slab Forms, Concrete	Moisture on Wood, Effect of270

*Monarch Wrench	Railway Concrete Construction181, 208
Motor Car Versus Hand Car	Railway Construction, Concrete228
*Motor Signal, Top-Mast260	Railway Conventions
Necessities for Good Roadway	Railway School
*New York Central & Hudson River R. R. Accident near	Railway Signal Association Convention281
Woodlawn	Railway Superintendents of Bridges and Buildings Con-
Norway Pine	vention
Nuts Working Loose on Track Bolts	Railway Telegraph Superintendents, Convention of203, 219
Oiling of Roadbed305	Railway Track, Past and Present180
Open Tank Process, Timber Preservation	Readers, Suggestions from
Opportunities in Telegraph Service	Realignment and Double Tracking307
Organization of Wrecking Outfits303	*Reinforced Concrete Bridge Design and Construction277
*Overhead Catenary Construction238	*Reinforced Concrete Skew Bridge, near Decatur, Ill., Wabash Railroad
*Overhead Counterweight Bridge, W. & L. E. R. R 192	*Reinforcing Concrete with Cup Bar
Painting Bridges308	*Relay, Contact, Mercury
Painting, Sand Blast in Bridge203	Relaying Gang, Work of305
Painting Steel Bridges in Winter43, 147, 198	Relays, Track
*Party Line Telephone System230	Renewing Ties, Cost of304
*Passenger Station, Seattle, Wash	*Retaining Wall, Concrete
*Passenger Station, Toronto, Canada	Right-of-Way Expenses
*Pennsylvania Railroad Improvement Between Philadel-	Roadbed Closs-Section, I. C. A. R
phia and Baltimore140	Roadbed, Drainage of
*Pennsylvania Railroad Standard Roadway 52	Roadbed Improvement
*Pendulum Hand Level	Roadbed, Tamping of
*Pile Trestle Subways181	Roadmasters' and Maintenance of Way Association Con-
*Pipe, Universal 65	vention302
*Pit, Cinder, El Paso, Tex., El P. & S. W. Ry 55	Roadway Deterioration, Causes of204
Pit, Cinder, Facilities	Roadway, Necessities for Good156
*Planimeter, Calculating Excavation	*Roadway Standards, Pennsylvania Railroad 52
*Polarized System, Distant Signal	*Rolling Lift Bridge, W. & L. E. R. R192
*Portable Drill Grinder	*Roundhouse, Oneonta, N. Y. D. & H. Co
*Post, Bumping, Cast Steel	*Roundhouse with Concrete Roof Construction, D. & R. G. R. R
*Post, Bumping, Hoboken Terminal, D. L. & W. R. R 17	Rubber Covered Signal Wire
Precautions for Track Work	Sand Blast, Bridge Painting203
Preservation of Timber280	Salisbury Wreck 4
Preservatives for Wood and Metal288	*Santa Fe Wide-Base Rail213
Prices on Track Materials	Sarco Asphalt Roofing Material
	*Screw Spikes196
Proceedings Railway Club, Designation of Subject 44 Progress in Track Construction	Screw Spikes with Helical Linings245
	Seasoning of Timber
Queries and Answers 4	Shimming Track
*Rail Anchor, Miller	Signal Association, Railway
*Rail Design, Wide-Base	*Signal, Audible Distant, Great Western Ry216
Rail Fracture in N. Y. State	*Signal Battery Vaults129
Rail Fractures155	Signal Engineering Apprenticeship Course166
Rail Joints307	*Signal System, C. M. & St. P. Ry262
Rail Question252	Signal Systems, Standardization of227
Rail, Relaying Gang305	*Signal, Top-Mast Motor260
*Rail Section, Hunt	*Signal, Turner Interlocking
Rail Specifications	Signaling Apparatus, Maintenance and Operation of 5 Signaling Installation in New Terminal Station at Wash-
*Railroad Curve Alignment	ington
Railroad Expenses, Distribution of	Signaling Methods
Railroad Mileage	Signaling System, Positive
*Railroad Safety Rod298	Signals, Electro-Pneumatic201
Railroad Spikes, Holding Force of	Signals, Interlocking and Block282
Railroad Spikes, Holding Power243	*Sixth Street Viaduct, Kansas City, Mo233
Railroad Tie Consumption	Smokejacks
*Railroad Yard, P. & R. Ry	*Smokejacks, C. & W. I. R. R
Rails. Broken 299 Rails. Crystallization of 180	Southwest, Railroad Building in the
Rails, Steel	Spikes, Railroad
Rails, Steel Expansion	Spikes, Tests of Holding Strength
Railway Club Proceedings, Designation of Subjects 44	Spiraling Curves222
Railway Clubs 3	Spring Track Work 44
3	
	· ·

**	
*Standard Roadway, Pennsylvania Railroad	Track Construction, Alaska Central Ry307
Standardization	Track Construction Progress 10 *Track Drill, Improved 151
*Station Coaling at Toledo, OL. S. & M. S. Ry 58	*Track Drill, Paulus
*Station, Passenger, Seattle, Wash	*Track Elevation, C. & N. W. R. R
*Station, Passenger, Toronto, Canada	*Track Elevation, C. & W. I. R. R
*Steel & Iron Freight Handling by Magnet167	Track Elevation, Long Island R. R
Steel Bridge Corrosion, Preventing	*Track Elevation, Method of
*Steel Cushioned Railroad Tie225	*Track Indicators, Illuminated
Steel Rails, Expansion 54	*Track Inspector, Automatic248
Steel, Structural	Track Labor, Efficient305
Steel Tie, Benjamin	Track Labor Question
Strength of Timber287	*Track Layer, Wescott298
*Stresses, Kaw River Bridge	Track, Maintenance of, in Winter
Structural Iron, Painting of	
Structural Timber, Strength of	Track, Past and Present
Student Work in the Field. 35 *Subway Abutments 182, 209	Track Relays
*Subways, C. B. & Q. Ry208	Track Work, Shovel
Success of Railroad Men	Track Work, Spring 44
Suggestions from Our Readers. 19 Switch Points 131, 198	*Track Wrench and Clamp. 316 Traffic, Expediting
*Switches, Safety Device for Facing Point272	*Traveling Crane Elevation with Jacks
*Switch Stands, Malleable Iron274 Tamarack	*Trestle, Temporary, C. & N. W. Ry
Tamping Roadbed	Trestles, Fire Protection of
Tanks, Watering Stock179	*Turnout, Location Inside of Curve
Telegraph Poles	*Union Passenger Station, Seattle, Wash211
Telephone Service, Maintenance and Operation of219	*Union Station at Little Rock, Ark., St. L. I. M. & S. R. R.170 *Union Station, Toronto, Canada, Grand Trunk and Cana-
*Telephone System, Chicago Terminal District, Rock Is-	dian Pacifiè184
land Railroad	*Universal Pipe
*Terminal, Freight, Central R. R. of N. J205	kane, Wash
Terminal, Hoboken, D. L. & W. R. R	Value of Discussion
R. R	*Vegetation in Track, Destruction of
*Terminal Warehouse, L. & N. R. R214	*Viaduct, Brush Creek, I. C. R. R237
Terminal, Washington, D. C	*Viaduct, French Broad River, Southern Ry277 *Viaduct, Kansas City, Mo
*Testing, Machine, Impact	*Vise-Grip Rail Anti-Creeper
*Three Position Upward Incline Signal System—Pennsyl-	*Wabash Railroad Concrete Skew Bridge, near Decatur,
vania R. R	#Wadsworth-Howland Company, New Factory of the 41
*Tie, Buhrer Steel	*Warehouse, Cent. R. R. of N. J
*Tie Handling Tool, Cafferty	*Warehouse, L. & N. R. R., Atlanta, Ga
*Tie Plate, Flinn202	Washington New Terminal Station, Signaling Installation
Tie Plates	Watering Stock in Transit178, 287
Tie Plates, C. R. I. & P. Ry. 259 *Tie, Simplex Metallic "T". 153	*Weed Burner, Gasoline
*Tie, Steel Cushioned	*Wescott Track Layer
Tie, Steel, Experiments with	*Wharf Cranes, Panama R. R195
Ties, Beech	*Wide-Base Rail
Ties, Consumption of	Wood, Effect of Moisture on
*Ties, Standard	Wreck, Salisbury 4
Tool, Cafferty Tie Handling	Wrecking Outlits
Tool Grinder, Portable201	*Wrench, Monarch 18
Top-Mast Motor Signal	*Wrench, Track
Tourneaure Impact Testing Machine	Yards, Freight, Pennsylvania R. R
Track Circuit Indicators, Illuminated253	*Yards, Railway, P. & R. Ry
Track Construction300	*Yards, W. & L. E. R. R., Brewster, O

